



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,189	07/23/2003	Junzhong Liang	0092050_DIV3	1261

7590 05/27/2005

Allen, Dyer, Doppelt, Milbrath & Gilchrist, P.A.
Suite 1401
255 South Orange Avenue
P.O. Box 3791
Orlando, FL 23802-3791

EXAMINER

SANDERS JR, JOHN R

ART UNIT	PAPER NUMBER
----------	--------------

3737

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,189

Applicant(s)

LIANG ET AL.

Examiner

John R. Sanders

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003 and 21 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/6/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claim 1-22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-76 of U.S. Patent No. 6,270,221. Although the conflicting claims are not identical, they are not patentably distinct from each other because both focusing the optical beam behind an anterior surface and focusing the beam behind the posterior surface (retina) result in the same finite source of secondary radiation reflected from the retina.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-4 and 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear which surface is being claimed by "the anterior surface", e.g. the front surface of the cornea, lens, retina, etc., especially since the claims are

Art Unit: 3737

directed to an “optical system” and not to the eye in particular, the inherent structure of which would at least serve to define what is meant by “the anterior surface”. In claims 4 and 16, it is unclear what surfaces are meant by “various anterior surfaces”. As the claim currently reads on any optical system, one of ordinary skill in the art when reading the claim would not be apprised of the scope of the invention due to the unknown structure of the broad optical system claimed.

Also, the terms “long-focal-length” and “small angle” in claims 2, 4, 14 and 16 are relative terms that renders the claims indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by “Objective measurement of wave aberrations of the human eye with the use of a Hartmann-Shack wave-front sensor”, J. Opt. Soc. Am. A, Vol. 11, No.7, July 1994 (“Liang ’94”).

Re claims 1 and 5: Liang ’94 discloses a wavefront analyzer with focusing means L1 (fig. 5) that is capable of moving the focal point of the incident laser beam forward or backward along the optical axis with respect to the retina. Liang ’94 is therefore capable of focusing the optical beam proximate a posterior such that the focal surface is other than the posterior surface.

Art Unit: 3737

Re claim 6: Liang '94 further discloses a shutter (fig. 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-13 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang '94 in view of U.S. Patent Publication No. 2001/0041884 to Frey et al. ("Frey").

Re claims 10, 11 and 13: Liang '94 discloses the laser and focusing means as previously discussed, but does not expressly disclose a polarizing means. Frey teaches a polarized laser light source and a polarization sensitive beam splitter commonly used in the art and exemplified by Frey for use in wavefront sensing. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Liang '94 to have a polarized light source and polarization sensitive beam splitter, as taught by Frey, in order to route the incident and reflected beam paths in a manner known in the art.

Re claims 7, 8, 17 and 18: Liang '94 does not expressly disclose the aperture array plate and CCD camera wavefront sensor arrangement. Frey teaches an aperture array plate and CCD camera wavefront sensor arrangement commiserate in scope with the instant claims. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the wavefront sensor of Liang '94 to that of Frey as both arrangements are functionally capable of measuring an incident wavefront.

Art Unit: 3737

Re claims 12, 20 and 21: Liang '94 does not expressly disclose a camera or fixation target. Frey teaches a camera (338) and a fixation target (366). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Liang '94 to incorporate the camera and fixation target of Frey in order to image the focal plane and have the patient focus at a fixed point, respectively.

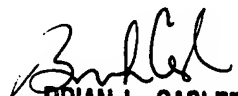
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John R. Sanders whose telephone number is (571) 272-4742. The examiner can normally be reached on M-F 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JRS


BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700